

ABSTRACT

For IC devices that have repeating structures, a method of generating a database for making a mask layer starts with a hierarchical database describing at least one repeating element in the layer, a skeleton that surrounds the repeating elements, and instructions as to where to locate the repeating elements within the skeleton. This database is modified to generate a database that has optical proximity correction (OPC) for diffraction of light that will pass through the mask and expose photoresist on the IC layer. The optical-proximity corrected mask database is fractured by a mask house using instructions on how the modified data base will be divided to form repeating elements that are still identical after OPC, a mask skeleton that includes non-repeating elements, and instructions for placement of the repeating elements in the skeleton. Thus the resulting mask database is smaller than a mask database that includes all copies of repeating elements.

202501-022502